

Land Use Policy Changes and Evolution of the Spatial Pattern of Pharmaceutical Establishments in Kaduna Metropolis, Nigeria

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Abstract

This study focused on the changes of land use policy in relation to the evolution of the spatial pattern of retail trade in pharmaceuticals in Kaduna metropolis. To carry out this study the coordinates of 430 establishments selling drugs on each street in Kaduna metropolis were recorded using GPS in 2004. A total of 122 drugstores were categorized as licensed drugstores having registered with Kaduna Government and the Pharmaceutical Council of Nigeria. The other 308 drugstores were classified as patent medicine stores. The period from 1966-2006, which was associated with major events in the political and socio-economic development of Kaduna and the development of land use policies in the metropolis were identified. Analysis of the two variables revealed that as land use policies developed and became more sophisticated embracing various urbanization processes as increase in population and commercial activities, the number of drugstores multiplied and the spatial patterns of retailing followed the laid down zoning and development control regulations stipulated by authorities. The study thus revealed a progressive close relationship between the development of land use policies and evolution of patterns of retail structure in pharmaceuticals in the study area.

Keywords: *Land use policy, Pharmaceutical establishments, Development control, Spatial patterns, GIS, Retailing.*

Background to the Study

Physical, social and economic development in national, urban and rural areas hinges on effective use of land. Land plays a principal role in environmental justice as stakeholders endeavor to effectively use land resources. For sustainable use of land, there has to be guidelines that are enforced by the authorities. This requires well-formulated policies and procedures for acquiring and using land.

Land policies are designed as guidelines for land use supervised by government bodies mandated with such matters. The policies of land use including zoning regulations in urban areas are important tools that balance the interests of land owners, private developer and the government.

The argument in this paper is that the evolution and development of the spatial pattern of pharmaceutical stores in Kaduna links very closely to development in land use policy. The policies since independence in 1960 have progressively had changes to which the increasing growth in the number of pharmaceutical establishments in Kaduna has kept responding. Depiction in the spatial system, of the response is examined, including the challenges with the aim of making recommendations for improving the policies and procedures.

Location and Origin of Kaduna

Kaduna metropolis is located where the Lagos-Kano railway line crosses the Kaduna River. Its coordinates are $10^{\circ}30'N$ and $7^{\circ}30'E$. The city's sphere of influence is bordered in the north by latitude 11° North, to the West its limit extends to longitude 7° East, on the East its border runs along longitude 8° East (Figure 1).

Kaduna is in the class of Nigerian modern cities that originated in direct response to the administrative and economic initiatives of the colonial period. It came to prominence in 1917 when Lord Lugard re-located the seat of government of the then Protectorate of Northern Nigeria from Zungeru to Kaduna. It became the capital of Nigeria's former northern region from 1917 to 1967. It was the capital of North Central State from 1967 to 1976, the capital of Kaduna State from 1976 to 1987 and is still the capital of new Kaduna State after Katsina Province was excised from the old Kaduna State to form Katsina State in 1987. It emerged from an army encampment to become a centre of administration, commerce, industry, education and military establishments in the northern part of the country (Chawa 1989; Ati et al, 2008).

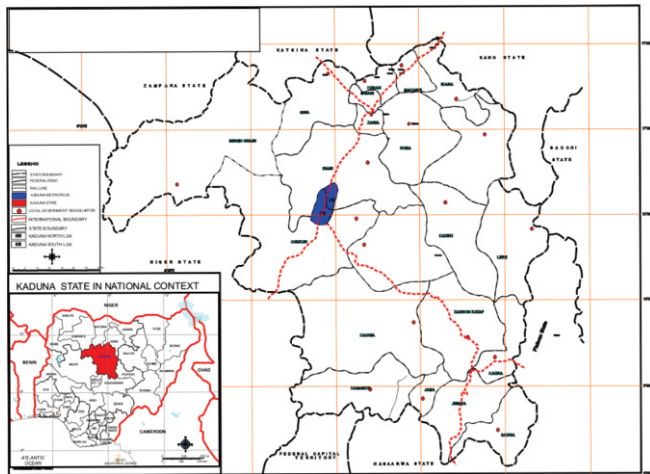


Fig. 1: Kaduna Metropolis in the context Kaduna State
Source: Kaduna State Ministry of Land and Survey, Google Earth, 2005.

Methodology

For this study, the first category of 122 establishments selling drugs in Kaduna was identified in 2004. They qualified for the administration of questionnaires having registered with Kaduna State Government and the Pharmacists Council of Nigeria. They were located on major streets and market areas in the metropolis. The other group of 308 drugstores, not registered with Kaduna State Government and the Pharmacists Council of Nigeria, were classified as patent medicine stores. Significant sub-periods in the development of spatial patterns of retail trade in pharmaceuticals from 1966-2006 were identified and related to land use policy changes in Kaduna.

The period covered was categorized into four sub-periods as follows:

- a. 1966-1970, the immediate post independence era, the period of the Nigeria Civil War, rehabilitation and reconstruction.
- b. 1971-1984, the oil boom period.
- c. 1985-1995, the structural adjustment programme era.
- d. 1996-2006, the period of privatization of public enterprises and promotion of private sector led economy.

The paper focuses on assessing the role played by the changes in the land use policies in the emergence of the spatial pattern of pharmaceutical establishments in Kaduna metropolis. Other policies that had roles in the development of drugs stores retailing patterns in Kaduna but are not the focus of this study are government regulatory policies and macro-economic policies.

Results and Discussion

Lugard's initial plan for Kaduna in 1913 was precise and rank conscious, with senior and junior officers' houses sited closer to the governor's house on the highest ground in the European reservation area. The rest of the plan showed residences further away from this peak, and the lower the rank, the smaller the plots, and the closer together the houses. Commercial and

traditional establishments were sited further south west of Lugard Hall near the rail line in Sabon Gari (now the Central Market area). In the 1950s the colonial administration's survey department drew up a series of plans for Kaduna's development. In 1962 a draft development plan for the city was produced by the town planning office in the Ministry of Land and Survey. The plan designated parts of the city as military land, commercial area, residential, industrial, schools and social services zones. This zonation sets the initial pattern for the location of activities and of development of Kaduna metropolis. It laid down a phased programme of development. Efforts made to make zoning proposals for Kaduna were at the initial stage when the Nigerian civil war broke out, the Northern Region for which Kaduna was the capital was divided into six autonomous states, resulting in massive transfer of personnel. The allocation of urban land for different uses is currently the responsibility of the Kaduna State Urban Planning and Development Authority (KASUPDA). The power to allocate and control the use of urban land is conferred on KASUPDA by the Nigerian Urban and Regional Planning Law Decree No. 88, 1992. The Development Control department of KASUPDA ensures that lands are used for the specific purposes they are allocated and that structures are built according to approved plans.

Retailing drugs is an important commercial activity and so it has similar guidelines of land use as other commercial activities in Kaduna. Generally commercial activities and structures in which they are carried out may be permitted by law on plots that are:

- (a) Located within commercial layouts
- (b) Whose owner's documents allow for commercial use
- (c) Up to 60 percent of plot would be developed
- (d) Adequate parking space is provided especially where the location of site warrants
- (e) Commercial buildings serving or attracting substantial number of people shall provide public facilities and conveniences.

Retailing of pharmaceutical products is regarded as non-polluting, so it is an activity that is compatible with many other commercial activities and may, and are indeed, found located amongst many other commercial establishments. Consequently pharmaceutical stores tend to spread with the growth of commercial activities in urban centers.

Land Use Policies 1966-1970

The guidelines for land use in Kaduna then were originated by the British colonial administration. Commercial activities were limited to the market centers in Sabon Gari (the strangers quarters), and the traditional market centers of Kawo, Kakuri, Ungwan Rimi and Tudun Wada. Retailing was carried out only on a few major streets in mixed-land use where goods were sold from residential buildings.

The establishment of the two drugstores between 1966-1970 in Kaduna was driven by economic motive given the demands in Kakuri and GRA, and facilitated by government policies (Figure 2). However while the one in Kakuri was motivated by the increase in population following the establishment Kaduna Textile Limited in 1956, the one in GRA served the interest of the high and middle classes.

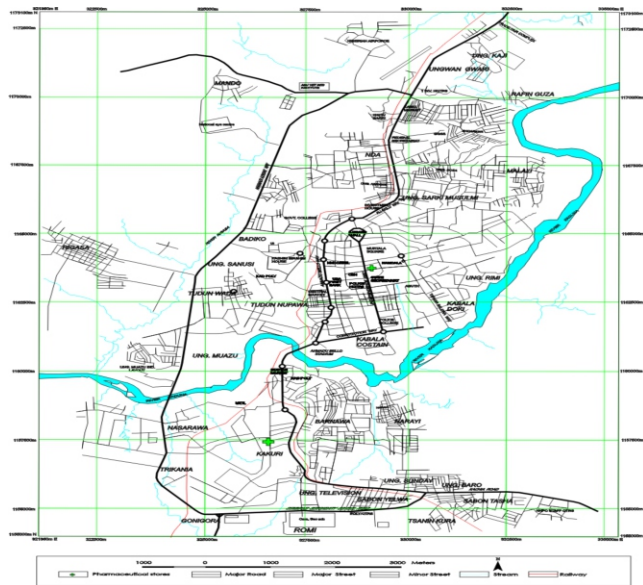


Fig. 2: Spatial Distribution of Licensed Drug Stores in Kaduna 1966-1970
Source: Kaduna State Ministry of Land and Survey, Google Earth, 2005

Land Use Policies 1971-1984

The land use policies and the allocation of land for various activities in the 1970s and the 1980s were principally based on guidelines set by Lock (1967). The Ministry of Land and Survey then implemented the guidelines as contained in the Kaduna Master plan of Lock (1967), adhering strictly by allocating plots and supervising the development of areas designated for activities as commercial, residential, military, schools, recreation and industrial layouts.

In accordance with the stipulated guidelines for commercial land use that, the area must be a commercial layout, with adequate parking space and the property attracting great number of people so that public facilities are provided, some areas and streets in Kaduna were designated for drugs retailing, as the central market area, Independence Way and Tafawa Balewa Way in the GRA, where drugstores were located in this period (Figures 3 and 4).

The process of rapid urbanization of Kaduna between 1971-1984 was also the period of expansion for the city. Government's deliberate effort of creating a western by-pass and the new development areas of Rigasa, Kawo, Sabon Tasha and Barnawa as a result of increasing population meant the allocation of land for commercial purposes in these areas. Therefore markets, stalls, and other retail points have been constructed and are in operation in these newly developing areas of Kaduna metropolis.

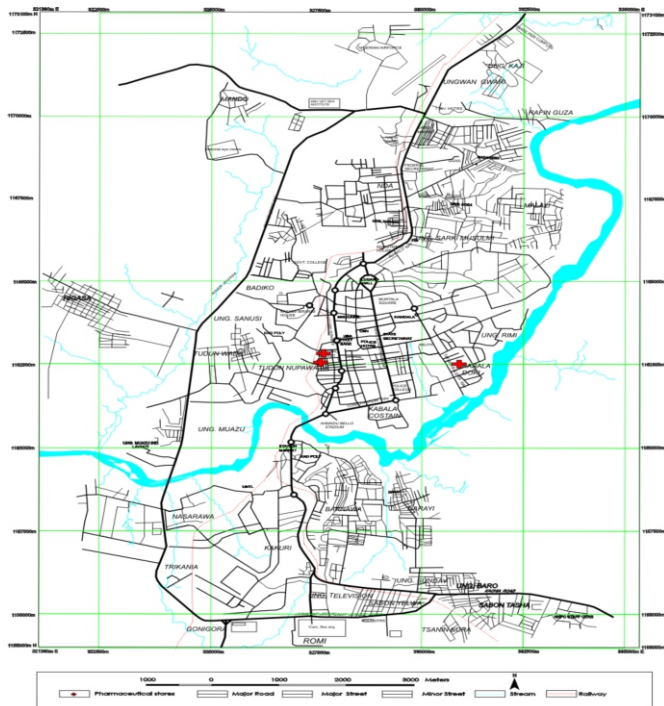


Fig. 3: Spatial Distribution of Patent Medicine Stores in Kaduna 1971-1984
 Source: Kaduna State Ministry of Land and Survey, Google Earth, 2005

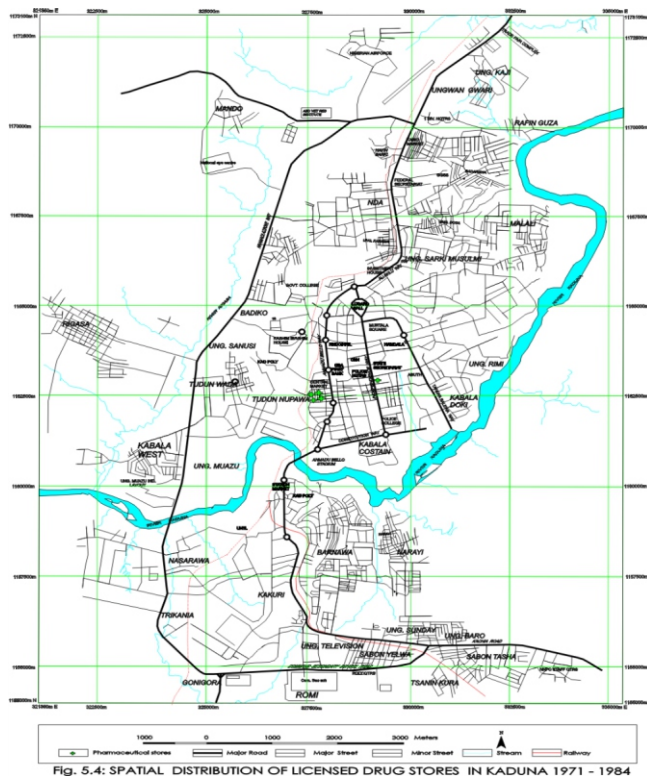


Fig. 4: Spatial Distribution of Licensed Drug Stores in Kaduna 1971-1984
 Source: Kaduna State Ministry of Land and Survey, Google Earth, 2005.

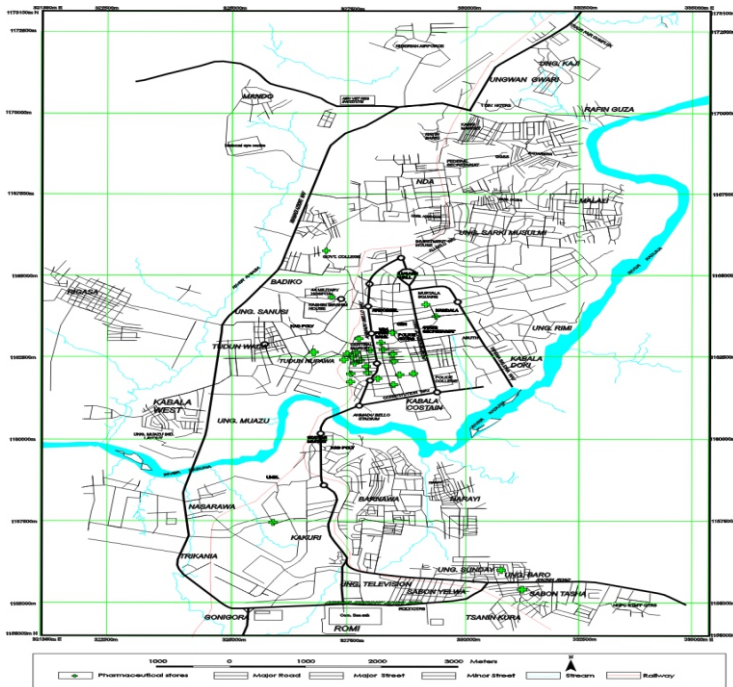


Fig. 6: Spatial Distribution of Licensed Drug Stores in Kaduna 1985-1995
Source: Kaduna State Ministry of Land and Survey, Google Earth, 2005.

Land Use Policies 1996-2006

The department of development control in KASUPDA carried out its function based on the Master Plan of Kaduna (Lock, 1967) that gave guidelines on the location of activities in the metropolis. Commercial activities and the retailing of drugs in particular were zoned in designated commercial districts in Kaduna metropolis. A major land use development during this period was land use re-zoning that took place in Kaduna which brought into existence commercial activities where none existed before, for instance, the new shops along Buhari Way opposite Hamdala Hotel and along some streets in the GRA which were hitherto entirely residential.

By the nature of retailing of pharmaceutical products, registered pharmaceutical and patent medicine stores have been located where they draw in many customers as along the major streets in Kaduna like Independence Way, Buhari Way, Rabah Road, Tafawa Balewa Way, Ungwan Sarki, Barnawa and Malali and the central market area with its high concentration of registered pharmaceutical and patent medical stores (Figures 7 and 8).



Fig. 7: Spatial Distribution of Patent Medicine Stores in Kaduna 1996-2006
Source: Kaduna State Ministry of Land and Survey, Google Earth, 2005.

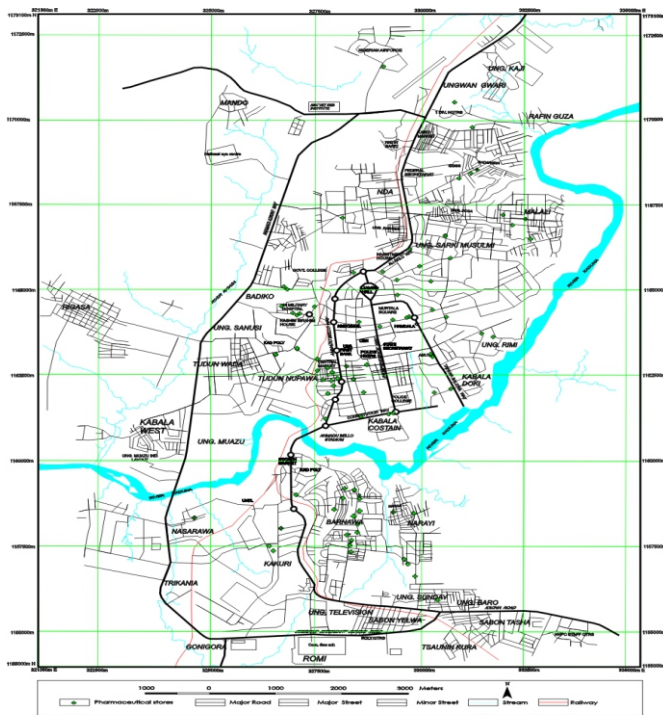


Fig. 5.8: SPATIAL DISTRIBUTION OF LICENSED DRUG STORES IN KADUNA 1996 - 2006

Fig. 8: Spatial Distribution of Licensed Drug Stores in Kaduna 1996-2006
Source: Kaduna State Ministry of Land and Survey, Google Earth, 2005.

Conclusion

Development of land use policies at various stages of Kaduna's urbanization from its embryonic stage as a military camp to the phase of becoming a metropolis has been significant in giving Kaduna its present townscape. Over the years efforts have been applied to ensure proper disposal of land for different uses in the metropolis. Zoning parts of the Kaduna specifically for wholesaling and retailing of drugs over the years received adequate attention. Pharmaceutics trade was zoned to designated areas and this ultimately gave spatial patterns as drugs store concentrations were formed in commercial areas, hospitals and streets with heavy traffic flows.

As revealed in the study, land use policies commensurately developed with increase in number of drugstores and evolution of pharmaceutical retail trade spatial patterns. Improvements in land use guidelines of the pre-colonial days to modern land use policies have to. However attempts at extending northern Nigeria land tenure system, a modification of the Maliki Law to other parts of the country has been stiffly opposed and demands for expunging it from the Constitution of the Federal Republic of Nigeria has been advocated for long. It is hoped that more conducive land use policies that consider the heterogeneity of the country will be promulgated to warrant satisfactory exploitation of land resources.

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